



Design & Technology Long Term Planning

Rationale

At Old Town Infant School and Nursery, Design and Technology (DT) involves applying knowledge and skills when designing and making. Design Technology is a foundation subject and the children of Old Town are provided with opportunities that are inspiring and creative from this it encourages children to become independent, creative problem solvers and thinkers as individuals and part of a team. Children are provided with opportunities to design, make and evaluate this is developed through their time at Old Town.

EYFS – Expressive Art and Design

EYFS Statutory Educational Programme: The development of children's artistic and cultural awareness supports their imagination and creativity. It is important that children have regular opportunities to engage with the arts, enabling them to explore and play with a wide range of media and materials. The quality and variety of what children see, hear and participate in is crucial for developing their understanding, self-expression, vocabulary and ability to communicate through the arts. The frequency, repetition and depth of their experiences are fundamental to their progress in interpreting and appreciating what they hear, respond to and observe.

Our curriculum work reflects the National Curriculum requirements for Design and Technology:

Key Stage 1

Design

- Design purposeful, functional, appealing products for themselves and other users based on design criteria
- Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology

Make

- Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]
- Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics

Evaluate









- Explore and evaluate a range of existing products. Evaluate their ideas and products against design criteria





Technical knowledge

- Build structures, exploring how they can be made stronger, stiffer and more stable explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.

Design

	Nursery	Reception	Year 1	Year 2
	<ul style="list-style-type: none"> To explore different materials freely in order to develop ideas about how to use them and what to make. To use the language of designing and making e.g. join, build, shape, weave, mix, longer, shorter, heavier etc... 	<ul style="list-style-type: none"> Say what they want to make Select appropriate resources Select appropriate tools and techniques needed to shape, assemble and join materials To say what they did and how they did it (materials, tools techniques) To plan what they want to make e.g. verbalise ideas To draw a plan of what they want to make e.g. pictorial 	<ul style="list-style-type: none"> Generate, develop, model and communicate their ideas through talking, drawing, templates, mock ups Design purposeful, functional, appealing products for themselves and other users based on design criteria Work as a class to identify the design criteria Draw a plan which could be an adjustment to an existing design Make choices around materials from a directed list. Make a list of the materials that they need for their design. To know that there is a reason behind why they need to design and make something. This is called a brief. That a design can be like original product with a small adjustment to improve. Discuss why they have made the choices they have in their design. Use given templates and mock ups to design and make their products 	<ul style="list-style-type: none"> That the design and planning process can be enhanced by generating more than one idea That brief design criteria can be solved / met in different ways That different materials have different specific properties which makes some more suitable than others to fulfil a brief. That every product should be targeted at a specific user / audience group of people and can be broken down into design criteria which identifies the need it should meet. That there are existing products in the wider world that can be used as a source of inspiration for new design. With help and advice, change part of the design, technical skill or material in response to a problem in manufacture. Use sketches, models and pictures with words to describe designs Discuss their choices linked to design linking back to the design criteria. Justify their choices of materials using scientific knowledge of their properties and suitability (can be verbal) Label their plans with materials required / chosen and their properties Have an understanding of their own skill level in terms of manufacture and use this to inform what is achievable in their design.

<p>Links to Old Town Visions and Values</p>	<p>Respect</p> <ul style="list-style-type: none"> • We take turns and share. • We take pride in the achievements of others. 	<p>Resilience</p> <ul style="list-style-type: none"> • We always try our best and are ambitious with our learning. 	<p>Independence</p> <ul style="list-style-type: none"> • We can make good choices and take responsibility for our own decisions. • We can ask questions to help us learn. • We are able to do things by ourselves and can seek help if we need it. 	<p>Curiosity</p> <ul style="list-style-type: none"> • We love learning about new things. • We explore, investigate and seek answers for ourselves. • We can ask great questions to develop our understanding. • We want to find out more. • We can wonder 'why'? 
<p>Make</p>	<ul style="list-style-type: none"> • Handle tools safely • Measure ingredients using non-standard measurements (cups, spoon etc...) • To mix, stir, cut, pour, shape and spread. • Wash their hands before cooking. • To explain what they are making and which materials they are using. • To join different materials • Make healthy choices about food. 	<ul style="list-style-type: none"> • Measure ingredients using non-standard measurements (cups, spoon etc...) • To mix, stir, cut, pour, shape and spread • Wash their hands before cooking. • Handle tools safely • Use scissors to make snips • Use of construction e.g. polydrons, smaller lego blocks, multilink cub • Know different ways in materials can be joined using glue, cellotape, making tape, split pins, staples, paper clips • Know that materials can be joined together in different ways and that some ways are better than others 	<ul style="list-style-type: none"> • Copy a teacher made mock up e.g. of a mechanism and show an understanding of how this works. • Accurately cut around templates and shapes • Assemble, join and combine materials and components • Make simple moving mechanisms e.g. levers and wheels with support. • Know how different mechanisms work and why/when they should be used e.g wheels and axles • Select from and use a range of tools and equipment to perform practical tasks (for example cutting, shaping, joining and finishing) • Use basic sewing technique to join two pieces of fabric. • Mark out and cut materials including textiles • Accurately draw and cut around templates and shapes 	<ul style="list-style-type: none"> • Measure and mark in order to cut out • Build simple 3D structures • Reinforce and stiffen materials e.g. using folding and layering. • Make a simple moving mechanism e.g. sliders and leavers. • Measure ingredients using non-standard and standard units of measure • Grate, peel, chop safely • Plans can be adjusted during the manufacture if part of it doesn't work
<p>Links to Old Town Visions and Values</p>	<p>Respect</p> <ul style="list-style-type: none"> • We take turns and share. • We take pride in the achievements of others. 	<p>Resilience</p> <ul style="list-style-type: none"> • We always try our best and are ambitious with our learning. • We persevere when things are difficult. • We don't give up easily. 	<p>Independence</p> <ul style="list-style-type: none"> • We can ask questions to help us learn. 	<p>Curiosity</p> <ul style="list-style-type: none"> • We love learning about new things. • We explore, investigate and seek answers for ourselves. • We can ask great questions to develop our understanding. • We enjoy being creative and 'thinking outside the box'. 

<h1>Evaluate</h1>	<ul style="list-style-type: none"> To dismantle, examine and talk about structures and objects. To describe textures. To understand that ideas don't always work. 	<ul style="list-style-type: none"> Identify what I like about my creation To understand the idea of improvement, eg by showing 2 models, noticing that one is better than the other and beginning to articulate why Talk about something that could be improved 	<ul style="list-style-type: none"> Explore and evaluate a range of existing products Evaluate their ideas and products against a design criteria Suggest improvements for their products and explain ideas 	<ul style="list-style-type: none"> That how effective a product is depends on how well it meets the brief. – To evaluate a product saying how well it works in relation to the purpose.
<h2>Links to Old Town Visions and Values</h2>	<p>Respect</p> <ul style="list-style-type: none"> We take turns and share. We listen to the thoughts and feelings of others. We celebrate similarities and differences between people. We take pride in the achievements of others. 	<p>Resilience</p> <ul style="list-style-type: none"> We always try our best and are ambitious with our learning. We believe that we can get better at things. 	<p>Independence</p> <ul style="list-style-type: none"> We can make improvements and learn from mistakes. We can ask questions to help us learn. We encourage and celebrate everyone's individuality. 	<p>Curiosity</p> <ul style="list-style-type: none"> We enjoy being creative and 'thinking outside the box'. We explore, investigate and seek answers for ourselves. We can ask great questions to develop our understanding. 
<h2>Technical Knowledge</h2>		<ul style="list-style-type: none"> Use the language of designing and making (join, build, shape) To identify healthy and unhealthy food 	<ul style="list-style-type: none"> That hands can carry germs and should be washed before handling food. That there are basic hygiene rules that should be followed when preparing food e.g. hands washed, hair up, apron on, sleeves rolled up. That tools e.g. scissors, knives, peelers need to be handled safely Needles need to be handled safely 	<ul style="list-style-type: none"> Know where food consumed comes from (source of food, how it is grown) There are rules to maintaining hygiene when following a recipe and food preparation. Recipes should be followed with precision when measuring ingredients That there are safety rules associated with using each tool.
<h2>Vocabulary</h2>	<p>Wash hands, healthy, unhealthy, tools, mix, stir, cut, shape, material</p>		<p>uses, materials, design, join, tools, split pin, paperclip, staple purpose, function, brief, templates, mock up, change, idea, improve, cut, shape</p> <p>mix, stir, cut, pour, shape, spread sieve, slice, squeeze and peel.</p>	<p>uses, materials, design, tools, purpose, function, criteria, brief, templates, mock up, target audience, appealing, properties, criteria, mechanism, change, idea, improve,</p> <p>mix, stir, cut, pour, shape, spread sieve, slice, squeeze grate and peel.</p>